

On the Chilopod Genera *Schizotaenia* and *Schizonampa*

RALPH V. CHAMBERLIN

Schizotaenia was validated as a genus by O. F. Cook in 1896 when he published diagnoses of *prognatha* and six other species in combination with it. The genus became restricted in 1909 by H. W. Brölemann through his erection of a genus *Ribautia* to which several of Cook's species are now thought to belong. In 1914 the genus *Schizotaenia* was further restricted by my proposal of a genus *Schizonampa* for a Brazilian species, *S. manni*, with which several African species also belong. *S. prognatha*, as described and illustrated by Cook, does not conform to either of these two genera and remains logically as the type of *Schizotaenia* and was so definitely designated by me in 1962 (p. 4).

The problem of defining *Schizotaenia* thus must rest for solution upon the correct identification of *prognatha*. In the absence of any specimen or specimens designated by Cook himself as his type or types, we must depend for this upon his original diagnosis as published in his 1896 paper (*Brandtia* VIII, p. 38) and 14 drawings showing important structural details but not published at that time. Relevant to this diagnosis and those of other species included in the same paper, Cook says in his introductory comments (p. 35):

"This group of Chilopoda is represented in Liberia by a few species which were named, described and figured over two years ago, but publication is still delayed, so that preliminary descriptions are offered here."

Of the drawings of *prognatha*, which were placed in my hands by Dr. Cook some time before his death, twelve were reproduced in my 1962 paper (cf. Plate VII), and the remaining two are here published (cf. Figs. 1 and 2).

The problem of identifying *prognatha* has been complicated by R. E. Crabill in a recent paper (1964) in which he makes and proceeds upon the assumption that a series of specimens in the

U. S. National Museum are the types of the species. At the outset two things may well justify doubt that these specimens can rightly be regarded as Cook's types. First, while the time at which Cook "named, described and figured" *prognatha* and the other species proposed along with it, according to the introductory statement quoted above, must have been in the first part of 1894 or earlier, some specimens of the National Museum series are labelled as collected as late as March, 1895, and hence could not have been before Cook when he made his diagnosis and drawings. The second point to be noted in this connection is that had Cook had the sixteen specimens of this series thus in hand at that time, it seems highly improbable that he would have made the special comment that *prognatha* is "rare in Liberia."

The deposit of labelled specimens in a museum, whether by the author of the name or by another, does not constitute publication or establish such specimens as types without some definite indication or adequate supporting evidence. In the present case, Crabill has given no such supporting evidence. On the contrary, as will be shown, negative evidence provided by the existing data justifies the conclusion that Crabill's assumption is premature and erroneous.

A major, and apparently decisive, difficulty in accepting the U.S.N.M. specimens as types of *prognatha* is that these specimens, according to Crabill's detailed description of them, present important differences from Cook's account of his own species, differences such as to make it obvious that the two accounts pertain to forms specifically, and in my opinion, generically distinct.* Some of the contrasts between the two accounts may be summarized as follows:

* In his paper Crabill repeatedly speaks of a "new description" or a "redescription" of *prognatha* as having been given by me in my 1962 paper, in reference to a brief characterization of *Schizotaenia* in a key to the genera of the Chilenophilinae. (Op. cit. p. 1.) The characteristics given in that key for setting off *Schizotaenia* are taken from Cook's own diagnosis and drawings, without the introduction of a single new item.

Schizotaenia prognatha Cook (1896)

"Antennae with last joint exceeding the last two preceding taken together." (Cf. Cook's drawings reproduced as Figs. 42-44 in Chamberlin, 1962, pl. VII).

"Pleurae of last segment . . . with a few large and small pores concealed under the last sternum." (Cf. e.g., Fig. 2.)

Both ultimate and penult legs with distinctly developed pre-tarsi but lacking true claws (Cf. Fig. 1 here reproduced and Figs. 51 and 52 in Chamberlin 1962.) "Rare in Liberia."

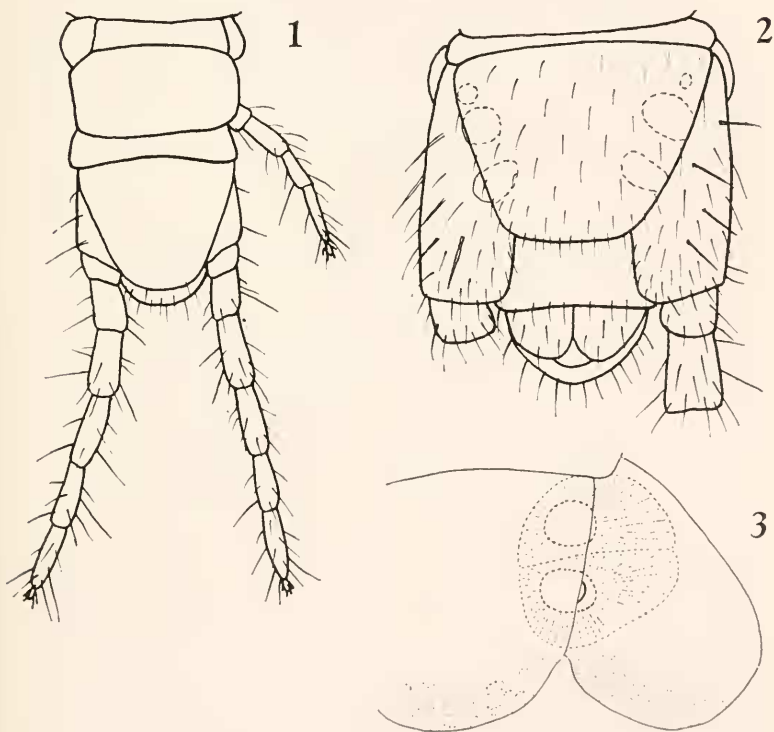


FIG. 1. *Schizotaenia prognatha* Cook. Caudal end, dorsal view.

FIG. 2. Caudal end, ventral aspect. (Drawings by O. F. Cook.)

FIG. 3. *Schizonampa prognatha* (Crabill). Ultimate pedal segment, ventral aspect 9 after Crabill.

Schizotaenia prognatha Crabill (1964)

Crabill, 1964, p. 38, Figs. 1-4.

Antennae "with ultimate article equalling the preceding two in length."

Ultimate coxopleurae each invariably "with two large concealed pore openings." (Cf. Fig. 3.)

Known from sixteen specimens taken at various times between Dec., 1891, and March, 1895, in the vicinity of Mt. Coffee, Liberia.

In laboring to reconcile these differences in support of his assumption as to Cook's types, Crabill finds himself compelled to make several other assumptions based upon his belief that the differences are due to errors or inaccuracies on the part of Dr. Cook. Thus, making the unqualified and so far unevidenced statement that "the Cook description was composite," he disposes of the difference in the coxopleural pores by suggesting that "Cook erred somehow, inadvertently figuring parts of two different species." He suspects that "the figure showing a coxopleuron with three pores was made not from a specimen of *prognatha* but "rather from a specimen of *Ribautia vara*" even though the latter is a much larger species (in length 28 mm as against only 9 mm), with body described as deep brown as against white, and with 47 pairs of legs as against 41-43 pairs. It seems incredible that an experienced student, even on a casual examination, could confuse these species. Similarly, in disposing of the characteristic feature of the penult legs in terminating in a definite pretarsus as in the anal legs Crabill says: "only two explanations come to mind: The character is erroneous and does not exist. Possibly there was some mistake in the labelling of figures. If that is not the case then it is the hallmark of some as yet unknown genus and species." Anything rather than recognize it as the hallmark of *S. prognatha* as given by Cook!

The genus *Schizotaenia* as typified by the species *prognatha* differs from the genus *Schizonampa* in the presence of these two characteristics of the coxopleural pores and the tuberculate penult legs. Thus:

- a. Only two large coxopleural pores on each side; penult legs ending in a normal claw and lacking a distinct pretarsus.....**Schizonampa** Chamb.
- aa. Several pleurocoxal pores. typically of two sizes, on each side; penult legs with distinct pretarsus but no claw.....**Schizotaenia** Cook

The specimens described by Crabill as *Schizotaenia prognatha* pertain to *Schizonampa* being plainly congeneric with *manni* the type of that genus. In that genus they represent the third species to be named and may be listed as follows:

Schizonampa prognatha (Crabill), new combination
Schizotaenia prognatha Crabill, 1964, Ent. News 75: 38.

Types.—With the transfer of this species from *Schizotaenia* to *Schizonampa*, the U.S.N.M. specimens designated by Crabill as the “lectotype” and “paralectotypes” of Cook’s *prognatha* become, respectively, the holotype and paratypes of the present species.

Locality. Liberia, on or in vicinity of Mt. Coffee.

Since in the thirteen complete type specimens of this species the number of pairs of legs varies by only two pairs, being 41 or 43, and in the eleven type specimens of *S. angolana*, the number of pairs varies similarly by only two pairs, being 37 in the males and 39 in the females, it seems justified to use this character as a dependable one in the diagnosis of the species of this genus. It is so used in the following key.

KEY TO THE KNOWN SPECIES OF SCHIZONAMPA

- 1. Anal pores present (Africa: Angola) ..**S. angola** Chamberlin
 With no anal pores.....2
- 2. Pairs of legs 41–43 (Africa: Liberia).....
**S. prognatha** (Crabill)
 Pairs of legs 37 (Brazil: Para).....**S. manni** Chamberlin

Each of these species is at present known only from its type locality and the three type localities are widely separated. It is reasonable to expect that in future collecting with adequate attention to the smaller and more obscure chilopods not only will the

ranges of the three species mentioned be extended but many related novelties will be brought to light. It is impossible on the basis of the presently known data to predict what forms will or will not be found when adequate collecting is carried out in the vast areas of South America and Africa now unexplored so far as this group of chilopods is concerned.

REFERENCES CITED

- BRÖLEMANN, H. W. 1909. A propos d'un système des Géophilomorphes. Arch. Zool. Expér. et Gén. ser. 5, 3: 103-340.
- CHAMBERLIN, R. V. 1914. The Chilopoda of Brazil. Bull. Mus. Comp. Zool. Harvard 58: 151-221.
- . 1951. On Chilopoda collected in North-east Angola by Dr. A. de Barros Machado. Separata da No 10 Das Pulicacoes Culturais da Companhia de Diamantes de Angola: 95-112.
- . 1962. Chilopoda secured by the Royal Society Expedition to Southern Chile in 1958-59. Univ. Utah Biol. Ser. 12(4): 1-29.
- COOK, O. F. 1896. Chilopoda from Liberia and Togo. Brantia VIII: 35-40.
- CRABILL, R. E. 1964. On the true nature of Schizotaenia, with notes on contingent matters. Ent. News 75: 33-42.

Notes and News in Entomology

Pilot Register of Zoology. A second issue has been announced, and consists of the following three cards:

No. 20. *Plethodon stormi* Highton and Brame *species nov.* (Amphibia: Urodela: Plethodontidae) from western United States.

No. 21. *Colobostruma papulata* Brown *species nov.* (Hymenoptera: Formicidae) from southwestern Australia.

No. 22. *Colobostruma nancyae* Brown *species nov.* (Hymenoptera: Formicidae) from southwestern Australia.

The 3 cards are available at approximate cost: \$0.25 U. S. (in U. S. stamps or coin), money order or UNESCO book coupons sent to: PILOT REGISTER OF ZOOLOGY, Department of Entomology, Cornell University, Ithaca, N. Y. 14850.

Single cards, ordered by number, at 10 cents (U. S.) each.